

IN THE CLAIMS:

Please amend the claims as follows.

Claim 1 (Currently Amended): A photomultiplier comprising:

an enclosure having an inner wall defining an internal space that is kept in a vacuum state, said inner wall including a flat part;

a photocathode, accommodated in said enclosure, emitting photoelectrons to the ~~inner~~ internal space of said enclosure in response to light captured through said enclosure;

an electron multiplier section, arranged on and in direct contact with the flat part of said inner wall, for multiplying in a cascading manner the photoelectrons emitted from said photocathode, said electron multiplier section having a structure making electrons multiplied in the cascade manner propagate along the flat part of said inner wall; ~~and~~

an anode, arranged on and in direct contact with the flat part on which said electron multiplier section is arranged, for taking out electrons having arrived thereat among the electrons multiplied in said electron multiplier section as a signal[.,,];

a photocathode electrode having one end being in direct contact with said photocathode, and the other end being exposed to the external of said enclosure;

an anode electrode having one end being in direct contact with said anode, and the other end being exposed to the external of said enclosure;

a first through hole accommodating said photocathode electrode therein and extending along a direction orthogonal to the flat part of said inner wall; and

a second through hole accommodating said anode electrode therein and extending along the direction orthogonal to the flat part of said inner wall,

wherein said anode is comprised of a silicon material, and

~~wherein, when viewing said electron multiplier section and said anode along an incidence direction of the light, said electron multiplier section and said anode are arranged along a direction orthogonal to the incidence direction of the light while being apart from each other~~

wherein said enclosure comprises:

a lower frame of insulation having a first inner surface, and a first outer surface opposing said first inner surface and exposed to the external of said enclosure;

an upper frame of insulation having a second inner surface facing said first inner surface, and a second outer surface opposing said second inner surface and exposed to the external of said enclosure; and

a side wall frame, provided between said upper and lower frames, having a form surrounding said electron multiplier section and said anode, said side wall frame being comprised of a silicon material,

wherein the flat part of said inner wall is included in any one of said first and second inner surfaces of said lower and upper frames,

wherein said first through hole is provided in any one of said lower and upper frames while being apart from said side wall frame, whereby said photocathode electrode accommodated in said first through hole is electrically separated from said side wall frame, and

wherein said second through hole is provided in any one of said lower and upper frames while being apart from said side wall frame, whereby said anode electrode accommodated in said second through hole is electrically separated from said side wall frame.

Claim 2 (Currently Amended): A photomultiplier according to claim 1, wherein said ~~enclosure comprises a~~ said lower frame is comprised of a glass material[[:]] ~~an upper frame~~ opposing said lower frame; and ~~a side wall frame, provided between said upper frame and said~~ lower frame, ~~having a form surrounding said electron multiplier section and said anode.~~

Claim 3 (Previously Presented): A photomultiplier according to claim 2, wherein said electron multiplier section and said anode are arranged on the flat part of said inner wall of said enclosure while in a state separated by a predetermined distance from said side wall frame constituting a part of said enclosure.

Claim 4 (Canceled).

Claim 5 (Previously Presented): A photomultiplier according to claim 2, wherein said upper frame is comprised of a glass material.

Claim 6 (Previously Presented): A photomultiplier according to claim 1, wherein said electron multiplier section is comprised of a silicon material.

Claims 7-8 (Canceled).

Claim 9 (Previously Presented): A photomultiplier according to claim 2, wherein each of said electron multiplier section, said anode, and said side wall frame is comprised of a silicon material.

Claim 10 (Canceled).

Claim 11 (Original): A photomultiplier according to claim 5, wherein said upper frame has a transmitting window for taking light into said enclosure.

Claim 12 (Canceled).

Claim 13 (Previously Presented): A method of manufacturing the photomultiplier according to claim 2, said method comprising the steps of:

preparing said lower frame, comprised of a glass material, constituting a part of said enclosure;

preparing said side wall frame constituting a part of said enclosure, said side wall frame being formed together with said electron multiplier section and said anode by etching a single silicon substrate;

preparing said upper frame constituting a part of said enclosure; and

fixing said side wall frame to said lower frame together with said electron multiplier section and said anode while making said side wall frame be in direct contact with said lower frame.

Claim 14 (Canceled).

Claim 15 (Previously Presented): A method according to claim 13, wherein said upper frame is comprised of a glass material; and

wherein said upper frame is in direct contact with and joined to said side wall frame such that said upper frame and said lower frame sandwich said side wall frame therebetween.

Claim 16 (Canceled).

Claim 17 (Previously Presented): A method according to claim 13, wherein said upper frame is formed with a transmitting window for taking light into said enclosure.

Claims 18-22 (Canceled).

Claim 23 (Currently Amended): A photomultiplier according to claim 1, wherein said anode has an electron-incidence surface to which a ~~that~~ part of the electrons multiplied in said electron multiplier section arrive at as a signal, the electron-incidence surface being substantially orthogonal to the flat part of said inner wall of the enclosure.